

## TRANSPORTATION

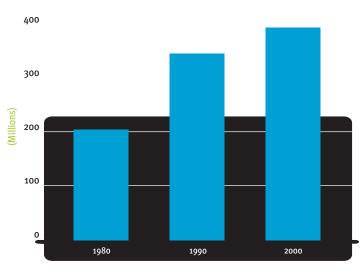


#### **Highway Use and Performance**

#### Why is this important?

■ The number of vehicle miles traveled (VMT) indicates the overall level of highway and automobile uses, and is directly related to mobile source emissions. VMT also has implications for various issues of concern including congestion, energy consumption, and demand for infrastructure improvements. ■

Figure 40
Daily Vehicle Miles of Travel

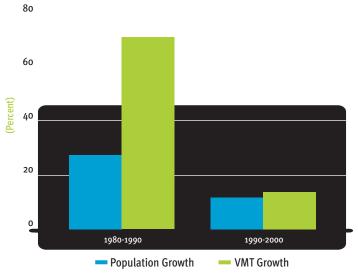


Source: California Department of Transportation

#### How are we doing?

From 1980 to 2000, the vehicle miles traveled in the region almost doubled (Figure 40). However, there were different patterns of VMT growth between the 1980s and the 1990s. From 1980 to 1990, VMT increased almost three times faster than population growth, 71 percent versus 26 percent (Figure 41). This was a consistent VMT growth trend in every county in the region (see Figure 41a page 97).

Figure 41
Population Growth vs. VMT Growth



Source: California Department of Transportation

However, the growth pattern was very different in the 1990s. During this time, VMT increased at about the same rate as population, which was approximately 13 percent. In addition, three counties (Imperial, Riverside and Orange) experienced less growth in VMT than their respective population growth (see Figure 41b page 97).

Slower population growth only partially explains the slower VMT growth rate during the 1990s versus the previous decade. Employment grew at a much smaller rate in the 1990s (8 percent) than the 1980s (24 percent). The widespread congestion of the region's highway system itself could have been a factor discouraging VMT growth. A slight decline of the real median household income is considered a factor limiting the growth of vehicle ownership and vehicle miles traveled. Contrary to national trend, the percentage of households without a car in the region actually increased from 1990 to 2000 (see Figure 84 page 82).

Los Angeles was ranked the most congested metropolitan area in the nation in both 1990 and 2000 by the Roadway Congestion Index. This index measures the level of congestion including considerations of the time duration and the percentage of the roadway system in congestion. In 2000, the Los Angeles Metropolitan Area also had the highest annual hours of delay and congestion cost per person.<sup>2</sup> However, while the congestion indices for the other large metropolitan areas increased significantly during the 1990s, Los Angeles maintained its congestion index level (see Figure 80 page 80).

#### **Transit Use and Performance**

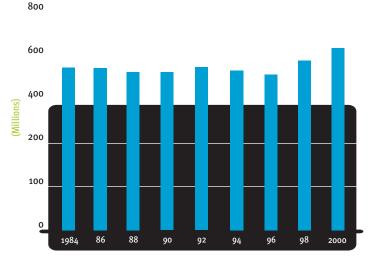
#### Why is this important?

■ Use of public transit helps to improve congestion and air quality and decrease energy consumption. Reliable and safe transit services are essential for many residents to participate in the economic, social and cultural life in Southern California. Work trips account for only about one half of the total transit trips. The indicator of annual unlinked transit trips measures the level of transit use at the system level. In addition, transit trips per capita provides a measure of transit use at the individual level.

#### How are we doing?

In 2000, total unlinked transit trips in the region reached 630 million, which is an increase of more than 40 million, or 7 percent, over 1999 (Figure 42). The increase in transit ridership during 1999-2000 was the highest since 1985. The Los Angeles County Metropolitan Transportation Authority (LACMTA) heavy rail (the Metro Red Line Subway System) annual ridership more than doubled, increasing from about 13 million to almost 28 million, between 1999 and 2000.

Figure 42 **Annual Unlinked Transit Trips – All Major Operators** 



Source: National Transit Database and SCAG

While annual transit trips were declining from 1991 to 1995, they have been increasing continuously since 1995. From 1990 to 2000, annual transit trips increased by about 20 percent. This increase in transit use was higher than both the VMT growth (15 percent) or population growth (13 percent) during the same period (see Figure 42a page 98). Accordingly, annual transit trips per capita increased from 36 transit trips in 1990 to 38 transit trips in 2000. An increase of both the percentage and the number of households without a car in the last decade provided a larger pool for potentially "captive" transit riders. In addition, the immigrant population, particularly those who arrived in the 1990s, had a higher propensity to use transit than the native residents.<sup>3</sup>

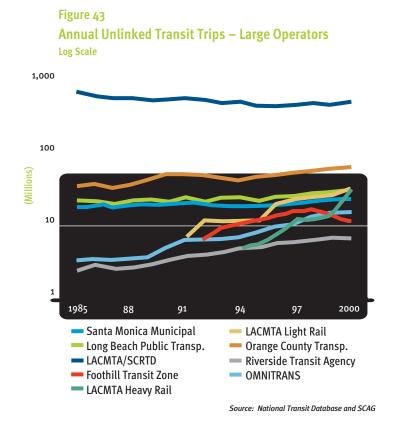
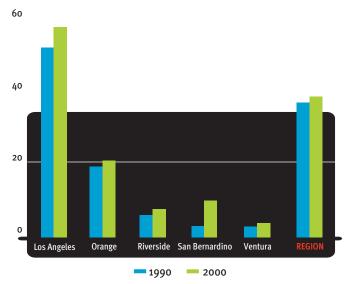


Figure 44
Transit Trips per Capita



Source: National Transit Database, 1990 and 2000 Census

The LACMTA, which continues to be the primary transit operator in the region, accounted for about 70 percent of the total unlinked transit trips in the region in 2000. Six of the nine large transit operators that account for 90 percent of the region's total transit trips are in Los Angeles County (Figure 43).

Since transit services have been heavily concentrated in Los Angeles County, transit trips per capita during 2000 remained much higher in Los Angeles County than the other counties in the region (Figure 44). However, transit trips per capita have also increased in each of the other five counties in the region. (See Map 8 page 43 on the region's commuter rail, urban rail and rapid bus system. Also see Map 9 page 54 on park and ride lots in the region.)

#### **Journey to Work: Travel Time**

#### Why is this important?

■ Though the share of work trips among total trips has been declining, work trips continue to generate disproportionately higher impacts. Work trips tend to be longer than other daily trips. In addition, commute hours are generally the period with the most traffic congestion. Accordingly, transportation investments are still influenced significantly by the nature of work trips. Finally, the choice of residential location is partly determined by the location of work and the associated journey to work.

#### How are we doing?

The Southern California Association of Government's (SCAG) 2001 Regional Transportation Plan (RTP) identified targets to be achieved by 2025, including an average travel time to work of 25 minutes for auto and 45 minutes for transit. Between 1990 and 2000, the average travel time to work increased in every county in the region (Figure 45). The region's average travel time to work increased from about 26 to 29 minutes, and continued to be higher than the state and national average. Within the region, workers in the Inland Empire (Riverside and San Bernardino Counties) continued to have the highest average travel time to work.

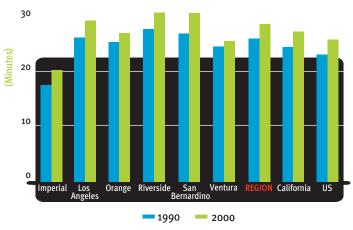
There were also different patterns of travel time distribution among counties in the region in 2000. The Inland Empire had a significantly higher percentage of work trips that were 60 minutes or more (Figure 45a page 98). Most of those trips were likely to be cross-county trips with longer trip length. Also both of the Inland Empire Counties had a higher percentage of work trips that were less than 25 minutes. (See Map 10 page 55 on average travel time to work.)

Figure 45

Average Travel Time to Work

(Workers 16 Years and Over)

40



Source: 1990 and 2000 Census

More than half the work trips by public transit in 2000 were less than 45 minutes (Figure 45b page 99). In addition, more than 30 percent of the transit work trips in 2000 were longer than 60 minutes. However, with the exception of Los Angeles County, about 50 percent of transit work trips in the region were longer than 60 minutes.

#### **Journey to Work: Mode Choice**

#### Why is this important?

■ Single-occupant vehicle use accounts for the highest level of land consumption among all transportation modes. It also generates the highest level of environmental and social impacts. Increasing the use of alternative modes to work (e.g., carpool, transit, etc.) is critical to accommodate future growth with less environmental, economic and social impacts. ■ ■

#### How are we doing?

Between 1990 and 2000, the national trend in the mode choice to work was an increase in drive alone commuting and a decrease in carpooling and transit use (see Figure 46a page 99). This is contrary to a shared public policy objective of decreasing the level of the drive alone commuting. Contrary to the national trend, the overall pattern of mode choice to work in the region remained essentially unchanged during the 1990s. In particular, the region maintained a higher level of carpooling than the rest of the nation. However, the percentage of workers driving alone did not decrease and continued to be the choice of 72 percent of workers in Southern California.

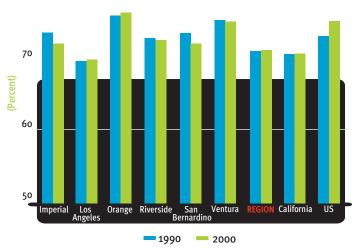
Within the region, Los Angeles County continued to have the lowest rate of workers who drove alone to work, while Orange and Ventura Counties continued to have the highest rates. Only San Bernardino and Imperial Counties showed noticeable improvements in reducing the drive-alone commute (Figure 46).

Figure 46

Drove Alone to Work

(Workers 16 Years and Over)

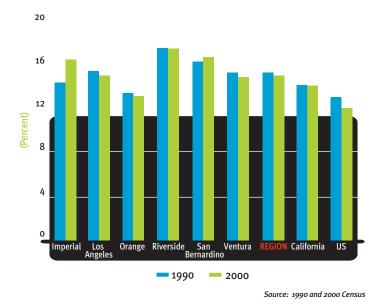
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Source: 1990 and 2000 Census

Among the nine largest metropolitan regions in the nation, the SCAG Region had the highest share of workers who carpooled (see Figure 82 page 81). The three inland counties had a higher rate of workers who carpooled to work than the three coastal counties (Figure 47). Orange County continued to have the lowest rate of carpooling in the region. There is a continuing effort to maintain the existing carpool share, since a one percent drop in the carpooling rate translates into more than 40,000 additional vehicles on our already crowded freeways and surface streets which in turn results in an annual increase of more than 300 million vehicle miles of travel.4

Figure 47
Carpooled to Work
(Workers 16 Years and Over)



The share of workers in the region that used transit for their commute increased slightly between 1990 and 2000 (Figure 48). Every county experienced a slight increase in transit use. Los Angeles County, with the most extensive transit system, continued to have the highest percentage of transit use in the region. San Bernardino County, whose number almost tripled, had the largest increase in both the percentage share as well as the absolute number of workers using transit to get to work. Among the nine largest metropolitan regions in the nation, the region ranked 7th in the transit share of journey to work trips, ahead of only the Dallas and Detroit regions (see Figure 83 page 82).

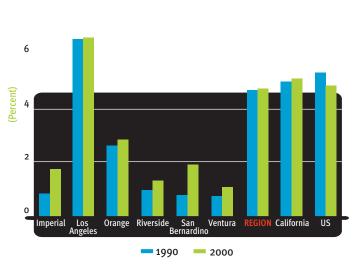
The number of people who "worked at home" in the region increased from approximately 186,000 to 241,000 between 1990 and 2000, an increase of about 30 percent, significantly higher than the population increase of 13 percent.

Figure 48

Transit to Work

(Workers 16 Years and Over)

8



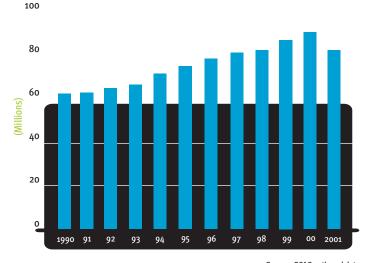
Source: 1990 and 2000 Census

#### **Airport Activities**

#### Why is this important?

■ Air transportation is vitally important to the regional economy of Southern California. Because of its geographical location, Southern California relies heavily on air transportation services to access and interconnect domestic and foreign markets. For example, airborne exports accounted for about 54 percent of the total value of commodity exports out of the Los Angeles Customs District (LACD) in 2000. Adequate aviation capacity and quality services are essential to the tourism, business, and trade sectors of the regional economy.

Figure 49
Air Passenger Traffic in Major Airports

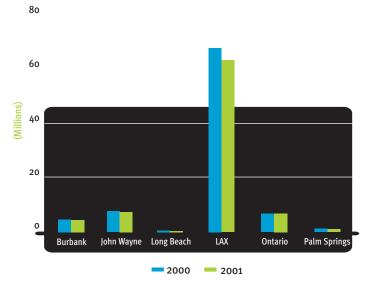


Source: SCAG gathered data

#### How are we doing?

For the first time since 1990, air passenger traffic in the region declined in 2001 (Figure 49). The combined effects of the decline of international trade activities due to recession (as further discussed in the International Trade Section), as well as the September 11 terrorist attack, led to the largest reduction of airport-related activities in a decade. During the month of September 2001, air passengers at the region's airports decreased by about 47 percent compared to August 2001 and by about 30 percent compared to September 2000.5 The international air travel market experienced the greatest decline, especially among risk-averse foreign tourists. From 2000 to 2001, the number of air passengers at the Los Angeles International Airport (LAX) decreased from 68 million to under 62 million (Figure 50). Each of the other five major airports in the region suffered a lower passenger decline than LAX.

Figure 50
Air Passenger Traffic by Airport

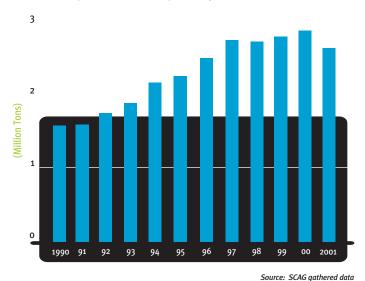


Source: SCAG gathered data

Among the region's airports, LAX also suffered the largest reduction in aircraft operations (Figure 50a page 100). Aircraft operations were reduced by 45,000 in 2001 from 2000 to a six-year low of 738,000. Despite the significant decline, LAX was still ranked the third busiest passenger airport in the world, behind only Atlanta Hartsfield International Airport and Chicago O'Hare International Airport.<sup>6</sup> While the region's airport activity declined in 2001, LAX's activity is expected to increase towards its ultimate physical capacity of 78 million annual passengers. However, its location in a built-out urban environment makes airport expansion both physically and politically challenging.

In 2001, the region also experienced the largest decline in air cargo since 1990 (Figure 51). Air cargo was reduced by 340,000 tons to a five-year low of just over 2.5 million tons from 2000. The leading airborne exports out of LACD by value are electronic components, computers and aerospace components.<sup>7</sup>

Figure 51
Air Cargo in the Six Largest Airports



The economic consequences of September 11 have strongly reverberated throughout the region. The impacts to airport activities in Southern California have likely been disproportionately severe compared to other parts of the country because of the greater importance of air services to the regional economy. The September 11 events may accelerate the growth of corporate jet activities at small air carrier airports such as Burbank Airport and John Wayne Airport, as well as large general aviation airports such as Van Nuys and Santa Monica.8

#### **Port Activities**

#### Why is this important?

■ Almost 85 percent of the imports through the Los Angeles Customs District (LACD) arrive at the region's ports. In addition, more than 55 percent of the nation's west coast port traffic is handled through the Ports of Los Angeles and Long Beach. Continuing to provide a world-class port infrastructure is critical to sustaining a growing and prosperous regional economy.

#### How are we doing?

In 2001, the Ports of Los Angeles and Long Beach combined processed over 142 million tons of cargo, which is a slight increase from the previous year and a near doubling from their 1990 level (Figure 52). The Port of Hueneme in Ventura County processed 3.3 million tons of cargo in 2001, which was a slight decrease from 3.4 million in the previous year.

Figure 52
Port Cargo at Los Angeles and Long Beach

160

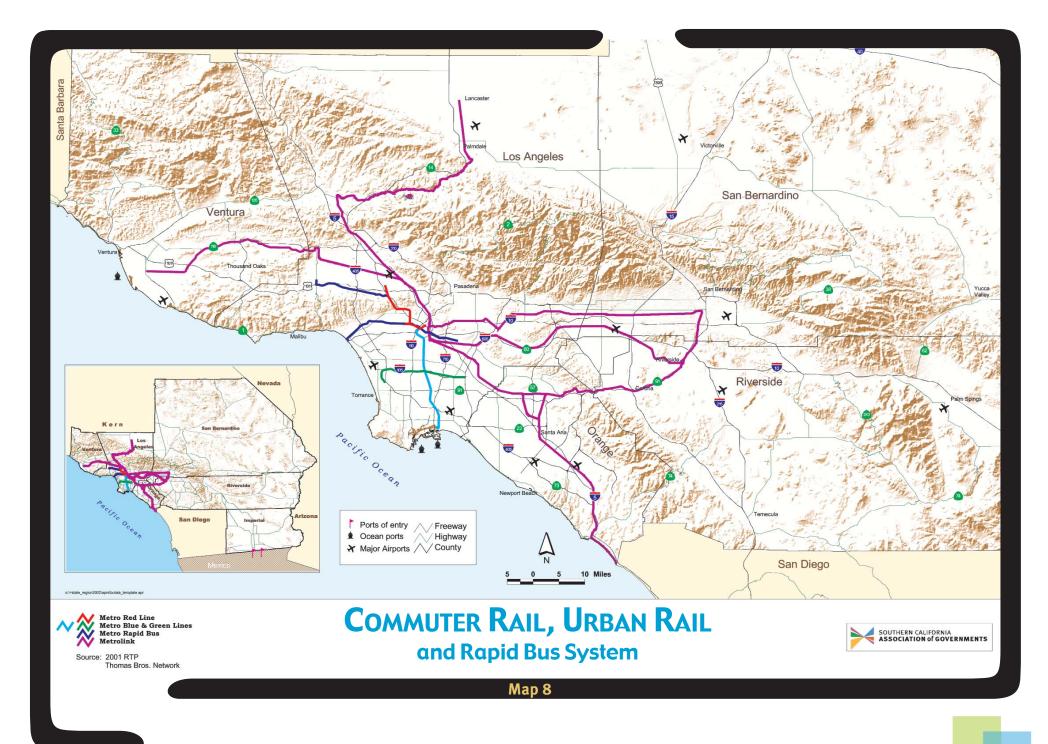
120 40 1990 91 92 93 94 95 96 97 98 99 00 2001

Source: Los Angeles Economic Development Corporation, 2002

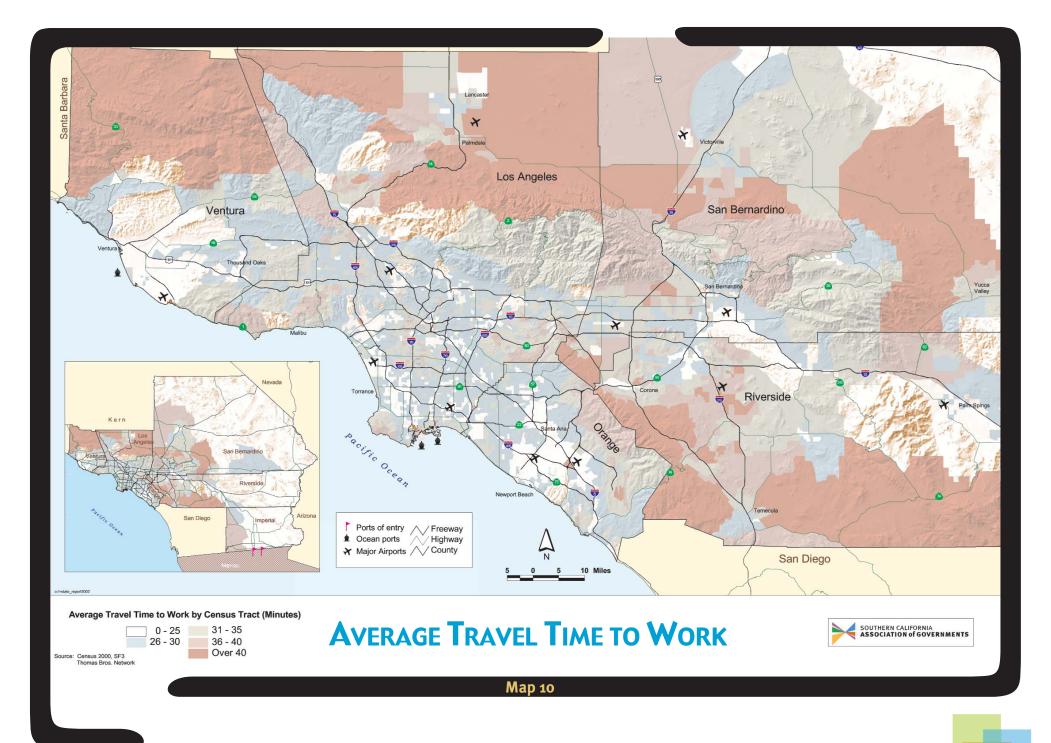
International Trade Trends and Impacts

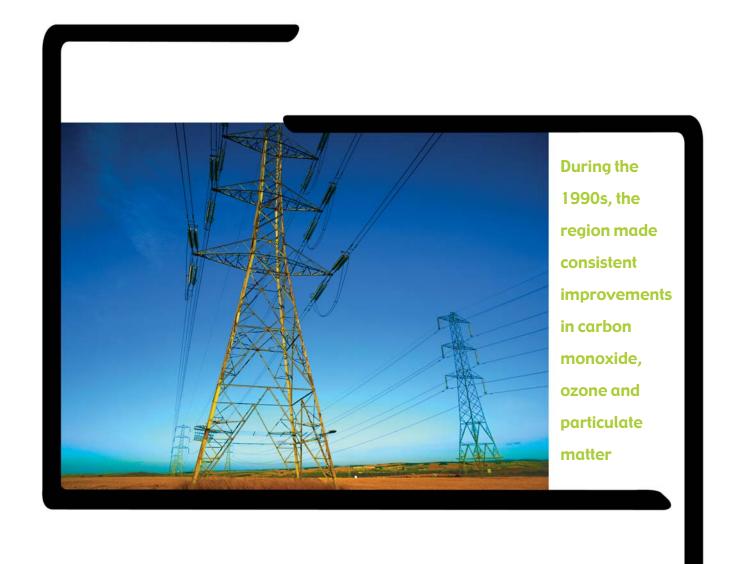
LACD contains the largest port complex in the nation, accounting for 25 percent of the nation's waterborne trade by volume. It is also the third largest container complex in the world, ranked behind Hong Kong and Singapore but ahead of Rotterdam and the major port complex in South Korea.<sup>10</sup>

There has been a major investment to upgrade the ports and the support infrastructure in the region. Most notably, the \$2.4 billion Alameda Corridor Project was completed in April 2002. In addition, two new "mega-terminals" at the Ports of Los Angeles and Long Beach are also partially open to handle large container ships.









## THE ENVIRONMENT

#### **Air Quality**

#### Why is this important?

■ Good air quality is vital for the health of residents, nature and the economy. Air quality regulations target six "criteria" pollutants that adversely affect human health and welfare: carbon monoxide, ozone, particulate matter, nitrogen dioxide, sulfur dioxide, and lead.

#### How are we doing?

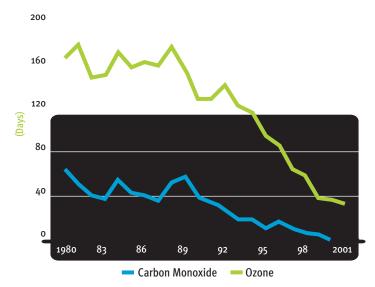
During the 1990s, the region made consistent improvements in carbon monoxide (CO), ozone and particulate matter (PM10) in fewer days exceeding federal or state standards. In addition, consistent improvements were also made in the decrease of number of days of second stage episodes.

#### Carbon Monoxide

The 8-hour federal standard for carbon monoxide (> 9.5 parts per million) was not exceeded on a single day in 2001 in the SCAG Region, compared to 67 days in 1980 and 3 days in 2000 (Figure 53). The locations with the highest concentrations of CO were in South Central Los Angeles County and the West San Fernando Valley. Carbon monoxide has become less of a national air quality problem over the past twenty years as concentrations in the air have decreased by 60 percent nationwide.¹ Transportation sources (e.g., automobile exhaust) account

for approximately 95 percent of the region's emissions. Declining transportation emissions have contributed significantly to the reduction in total CO emissions. Contributors to reduced CO emissions from motor vehicles include national standards for tailpipe emissions, new vehicle technologies, and use of oxygenated gasoline.

Figure 53
Number of Days Exceeding Federal Standards
In the SCAG Region



Note: Ozone data represents the total number of days the Federal 1-hour standard was exceeded at all monitoring stations in the South Coast Air Basin

Source: South Coast Air Quality Management District

#### **Ozone**

Ozone occurs both in the Earth's upper atmosphere and at ground level. Ozone occurs naturally in the Earth's upper atmosphere (stratospheric) – 10 to 30 miles above the Earth's surface – where it forms a protective layer that shields us from the sun's harmful ultraviolet rays.

Ground-level ozone (tropospheric) is formed when pollutants emitted from various sources including motor vehicles and industrial sources react chemically in the presence of sunlight with NO2, dependent upon weather-related factors. Ozone pollution is a concern during the summer months, when the weather conditions needed to form it – lots of sun, hot temperatures – normally occur.

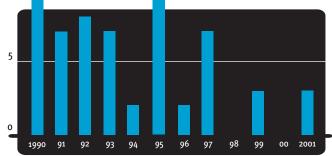
Ozone is a good indicator of overall air pollution. Progress in attaining state and federal standards is limited by the fact that ozone and its precursory pollutants can be carried long distances from their original sources by the wind. Even though tropospheric ozone is the most persistent air quality problem, the number of days exceeding the onehour federal standards for ozone (> 0.12 parts per million (ppm) parts of air, by volume per hour) have declined by almost 79 percent in the South Coast Air Basin between 1980 and 2001. The Basin exceeded the federal one-hour standard for ozone during 36 days in 2001, compared to 167 days in 1980 and 40 days in 2000 (Figure 53). All of the federal standard exceedances have occurred during the months from May to September. Furthermore, health advisories were issued on only 15 days in 2001 in the Basin, a decrease of approximately 89 percent from 1980. For the third year in a row, the region has not had a single Stage 1 ozone episode, (when air quality is very unhealthy (one-hour average ≥ .20 ppm)), proving that such ozone levels are a thing of the past (see Figure 53a page 100).

#### Nitrogen Dioxide and Sulfur Dioxide

Oxides of Nitrogen, or NOx, is the generic term for a group of highly reactive gases, all which contain nitrogen and oxygen in varying amounts. One common pollutant, nitrogen dioxide (NO2), along with particles in the air, can often be seen as a reddish-brown haze over many urban areas. NOx and the pollutants formed from NOx can be transported over long distances, following the pattern of prevailing winds. As a result, problems associated with NOx are not confined to areas where NOx are generated. Controlling NOx is, therefore, often most effective if done from a regional perspective, rather than focusing on sources in one local area.

Figure 54
Percent of Days Exceeding Federal Standards (PM<sub>10</sub>)

10 (June 10 )



Source: South Coast Air Quality Management District

In 2001, the federal nitrogen dioxide standard was not exceeded in the Basin, with a maximum concentration of 0.0419 ppm, which was 78 percent of the standard. In addition, concentrations of SO2 were below the federal standard at every monitoring location in the Basin in 2001.<sup>2</sup>

#### **Particulate Matter**

Particulate matter is the general term for a mixture of solid particles, including pieces of dust, soot, dirt, ash, smoke and liquid droplets or vapor directly emitted into the air, where they may remain suspended for long periods of time. Sources of particulate matter include stationary, area, and mobile sources. Of greatest concern to public health are the particles small enough to be inhaled into the deepest parts of the lung that are less than 10 microns in diameter. One 10-micron particle is about one-seventh the thickness of a human hair, and is known as PM10. Health problems begin as the body reacts to these foreign particles. Although PM10 levels have fluctuated over the years, the region has still witnessed a decrease by 83 percent of sample days that have exceeded the federal standard since 1985.3 Only three percent of the sample days exceeded the federal standards in 2001.

The AQMD began in 1999 to record the number of Basin-days that the PM2.5 federal standard was exceeded. PM2.5 are particulates that are 2.5 micrometers or smaller. Based on the recognition that smaller particles are more likely to be inhaled deeper into the lungs, PM2.5 is considered a better indicator of public health impact than PM10. The federal standards for PM2.5 were exceeded 15 days in 1999 and 23 days in both 2000 and 2001 in the region.

In the Los Angeles area, transportation is the most important source of PM10, accounting for approximately 40 percent of this pollutant.<sup>4</sup> In the Los Angeles basin primarily during the May through October summer

period, particles form photochemically in the atmosphere from gaseous motor vehicle exhaust and industrial emissions, accounting for approximately 20 percent of PM10.5 Air quality is worse in the Inland Empire counties of Riverside and San Bernardino, due to both weather conditions and geography. These counties, however, are not the major emitters of this pollutant.

In June 2002, the California Air Resources Board passed new, stricter standards for particulate matter, amounting to new clean air goals for the state. The standards are to become effective by early 2003. Also in June 2002, the AQMD adopted a stringent dust control plan for the Coachella Valley to reduce particulate pollution levels and protect residents' health.<sup>6</sup>

#### **Water Resources**

#### **Total Water Consumption**

#### Why is this important?

■ Ensuring reliable water resources to meet essential water demands and maintaining water quality are important goals in Southern California. ■ ■

#### How are we doing?

The Metropolitan Water District (MWD) serves approximately 85 percent of the region's population. MWD is the largest water wholesaler for domestic and municipal uses in Southern California. Water use in the MWD service area comes from both local and imported sources. MWD obtains its water supplies from two sources: Northern California's Bay-Delta through the California Aqueduct and from the Colorado River through its own Colorado River Aqueduct. The city of Los Angeles

purchases water from MWD to supplement its supplies from the Los Angeles Aqueduct (LAA), local groundwater, and recycled water. <sup>7</sup>

MWD customers within the region grew from approximately 12.5 million in 1990 to 14.2 million in 2000.8 Of the 3.43 million acre-feet of water used in 2000, 3.14 million (91 percent) were used for municipal and industrial or urban purposes, and the remaining 0.3 million (9 percent) were used for agricultural purposes (Figure 55). The relative share of municipal and industrial water use to total water use has been increasing over time in the SCAG Region as agricultural water use has declined due to urbanization and market factors, including the price of water.

Total water consumption in the MWD service area increased from 3.25 million acre-feet in 1990 to 3.43 million acre-feet in 2000, an increase of approximately 5.4 percent. Agricultural water use decreased by nearly four percent from 302,000 acre-feet in 1990 to 290,200 acre-feet in 2000. Municipal and industrial use increased by 6.4 percent from 1990 to 2000, from 2.95 to 3.14 million acre-feet.

Figure 55
Water Consumption in Metropolitan Water District Service Area
In Acre Feet (000)

	Agricultural		Urban/Retail		Total Use	
County	1990	2000	1990	2000	1990	2000
Los Angeles	3.9	4.9	1,784.5	1,821.3	1,788.4	1,826.2
Orange	30.5	25.9	629.8	671.4	660.3	697.3
Riverside	208.5	199.2	235.9	308.2	444.4	507.4
San Bernardino	33.5	44.5	184.2	209.6	217.7	254.1
Ventura	25.6	15.7	115.1	127.1	140.7	142.8
TOTAL	302.0	290.2	2,949.5	3,137.6	3,251.5	3,427.8

Note: The Metropolitan Water District does not serve Imperial County.

Note: One acre foot equals 326,000 gallons

Source: Metropolitan Water District: Planning and Resources

#### **Per Capita Water Use**

#### Why is this important?

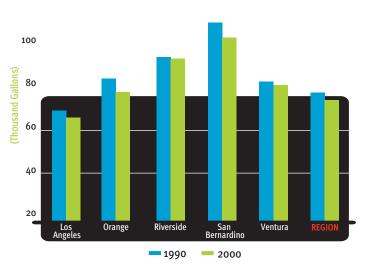
■ Water consumption per capita is important when looking at a city's or county's growth projections in order to maintain a safe yield per person and sustain community well-being ■ ■.

#### How are we doing?

120

Despite a population increase, per capita water consumption decreased in all counties in the SCAG Region from 1990 to 2000, with a regional decrease of over 6 percent (Figure 56). Per capita numbers do not include agricultural demands, only retail municipal and industrial consumption. Annual water consumption by San Bernardino County

Figure 56
Per Capita Water Consumption



Note: MWD service area includes Retail Municipal and Industrial use, not Agricultural use
Source: Metropolitan Water District

residents exceeded the regional average by 42 percent in 1990 and 43 percent in 2000. Residents of Los Angeles County used an average of 179 gallons of water per person per day in 2000, whereas residents of San Bernardino County used an average of 284 gallons per person per day. This indicates that residents of the cooler, denser coastal Los Angeles County use significantly less water than residents of inland San Bernardino County, which is warmer and less dense.

#### **Water Recycling and Alternative Water Supply**

Water recycling is the treatment and disinfection of municipal wastewater to provide a water supply suitable for non-potable (nondrinking water) purposes. Potential uses of recycled water include irrigating landscape, filling lakes, recharging groundwater basins, and providing water for non-potable uses, such as toilets and industrial uses. The SCAG Region is estimated to grow by approximately six million people by 2025, yet the quantity of water imported to the region will likely decrease, as water is diverted to competing demands such as population growth outside the region and environmental needs. Furthermore, water supply is subject to changes in climate and state and federal regulation. To remain reliable, Southern California households, workplaces, and agricultural operations need to make the best use of the supplies the region has – as well as improve the quality of the water coming to Southern California. The region needs to efficiently use and reuse water as well as explore alternative water supplies.

#### **Beach Closures**

#### Why is this important?

■ When the ocean waters adjacent to a beach contain sufficient concentrations of certain bacteria, they are not safe for swimming and

other recreational uses. In 1999, the California Department of Health began monitoring all beaches with more than 50,000 annual visitors and that are affected by a flowing storm drain, river, or creek. Closures or advisories are issued for beaches that fail to meet the state's standards for various sources of pollution. ■

#### How are we doing?

During wet weather, storm drain runoff is the largest source of pollution to local beaches, flowing untreated to the coast and severely impacting water quality. Runoff is often contaminated with motor oil, animal waste, pesticides, yard waste and trash. A rain advisory is issued anytime there is significant rainfall that may affect bacteria levels in ocean waters. Levels of bacteria can rise significantly in ocean waters, during and after rainstorms, especially when they are adjacent to storm drains, creeks and rivers.

Beach advisories and closings increased by 14 percent statewide from 2000 to 2001, partly due to greater rainfall quantities in 2001 compared to 2000 levels, and partly due to the fact that more municipalities are monitoring their beaches more regularly. Among all California counties, Orange County reported the highest number of closings/advisories for 2001 followed by Ventura, Los Angeles, San Diego, and Santa Barbara. The total closings and advisories by county in 2001 were 1,540 in Ventura, 1,592 in Orange and 1,046 in Los Angeles. Los Angeles County experienced a 17 percent decrease in total closings and advisories in 2001, while both Ventura and Orange Counties had roughly a 80 percent increase in closings and advisories for the same year.9

In both Los Angeles and Orange Counties the beach advisories and closings were primarily due to bacteria levels that exceeded standards. In most cases, the contamination was from undetermined sources. A

small percent was due to general rain advisories, sewage discharges, and storm-water washing pollution into beach water. In Ventura County approximately 82 percent of the beach closings were due to elevated bacteria levels from stormwater, while 18 percent were of unknown origin.<sup>10</sup>

#### **Natural Systems**

#### Why is this important?

■ The landscape of the SCAG Region has experienced significant changes over the years, largely resulting from human impact and rapid growth. The region is witnessing significant changes in not only the urban and suburban areas of the region, but also in the agricultural areas.

#### How are we doing?

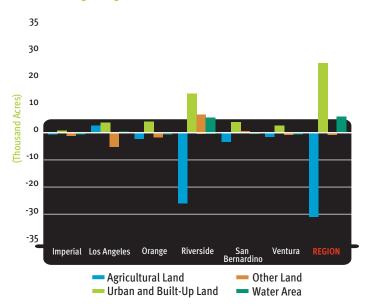
The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) conducts biennial land use inventories, the latest occurring in 2000 for the period of 1998-2000. The inventory of agricultural and urban land use for the six-county SCAG Region includes both private and public land.

In the region as a whole, there were 25,453 acres of new urban land (Figure 57). This resulted primarily from the net loss of 31,101 acres of agricultural land, which includes both farmland and grazing land. For the 1998-2000 inventory, Riverside County led all other SCAG counties with 14,080 new urban acres. It was also the leader in net losses of agricultural land in the region, with 26,747 acres going out of production. The conversion of 6,814 acres to the Other Land category was primarily due to the establishment of the San Jacinto Wildlife Area, the Santa Rosa Plateau Ecological Reserve, and the Southwestern

Riverside County Multi-Species Reserve. The 5,853 acres converted to the Water Area category was due to the completion of the Diamond Valley Reservoir near Hemet and the addition of Mystic Lake in the San Jacinto Wildlife Area. A total of 1,934,615 acres were inventoried in Riverside County for both 1998 and 2000.<sup>11</sup>

Los Angeles County was the only county to significantly gain, rather than lose agricultural acreage. The 2,022 acres that the county gained were the result of a conversion of 4,166 acres to prime farmland due to newly irrigated agricultural land, primarily carrots and potatoes, in the Antelope Valley area. The county did, however, have a net loss of 1,307 acres of grazing land in order for the farmland acreage to expand.12 In

Figure 57
Land Use Conversion, 1998-2000
Net Acreage Changed



Source: California Department of Conservation Division of Land Resources Protection addition, the Trust for Public Land has spearheaded the effort to protect land along the Los Angeles River Greenway.

The conversion to Urban and Built-Up Land in Imperial County (net change of 366 acres) was for a water control structure on the Holtville West quadrangle.

#### **Solid Waste**

#### Why is this important?

■ A sustainable society minimizes the amount of waste sent to landfills by reducing, recycling or reusing the waste generated as much as possible. ■ ■

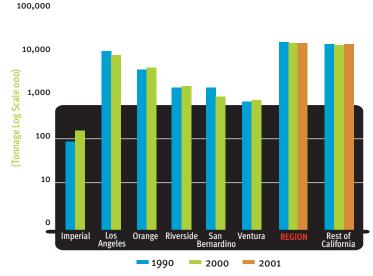
#### How are we doing?

Solid waste disposal at landfills measures the response to California's adoption of the Integrated Waste Management Act (IWMA) of 1989. Under the oversight of the California Integrated Waste Management Board (CIWMB), California's cities, counties and businesses have implemented thousands of diversion programs, such as curbside recycling pickups, drop-off centers, green waste collection, and municipal composting. The IWMA established a 50 percent goal for solid waste diversion from landfills for jurisdictions in California. Diversion rates are calculated by removing disposal from estimated generation and expressing the remainder as a percent of total generation. These rates are used to evaluate the progress of a particular city or county in reducing waste and complying with the IWMA.<sup>13</sup>

The 2001 economic downturn in California resulted in a negative effect on the recyclable commodities markets. Because waste generation is highly correlated with economic and demographic change, generation increased at a lower rate in 2001, a little less than 3 percent. The 2001 statewide diversion rate remained the same as it was in 2000, at 42 percent compared to 10 percent in 1989. Since 1990, the CIWMB estimates that Californians have diverted 195.8 million tons of waste from disposal.<sup>14</sup>

Despite the rising population, residents of the SCAG Region reduced the amount of waste sent to landfills by 10 percent between 1990 and 2000 (Figure 58). San Bernardino County reduced the amount of waste it sent to landfills by 42 percent, while the amount of waste Riverside County sent to landfills increased by 11 percent. Imperial County, on the other hand, increased the amount of waste it sent to landfills during the decade by 118 percent. The total amount of waste the SCAG Region sent to landfills remained relatively constant from 2000 to 2001.<sup>15</sup>

Figure 58
Solid Waste Disposal at Landfills



Source: California Integrated Waste Management Board

#### **Energy**

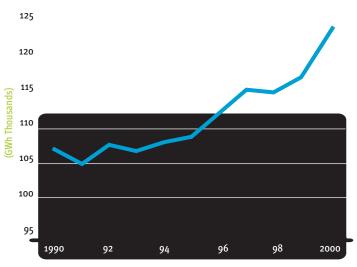
#### Why is this important?

■ Adequate energy is essential to support the regional economy and meet the demands of the increasing population in the region. Energy uses from different sources also create different environmental, fiscal and public health impacts. ■

#### How are we doing?

During the 1990s, rapid population growth as well as growth in the economy and the boom in computer- and power-driven e-commerce, caused an increase in power demand throughout California and the West. The SCAG Region's growth in power demand was similar to that of

Figure 59 **Electricity Consumption** 



Source: California Energy Commission, California Energy Demand Forecast, September, 2001

Figure 60
Electricity Use by Provider

Plan Area

Flaii Alea	1990	2000						
Electricity Consumption (GWh)								
SCE*	81,673	96,050						
LADWP	21,971	24,115						
BGP**	2,951	3,281						
REGION	106,595	123,446						
Peak Demand (MW)								
SCE*	16,879	18,724						
LADWP	4,920	5,031						
BGP	773	842						
Region	22,572	24,597						
		,,,,,,						

1000

2000

\*SCE figures include forecasts for municipal utilities besides LADWP, Burbank, Glendale and Pasadena. SCE service territory includes some area outside the SCAG Region. \*\* Burbank, Glendale and Pasadena power utilities.

Source: California Energy Demand 2002-2012 Forecast, September 2001

the state as a whole. During the 1990s, electricity consumption in the region increased almost 16 percent (Figure 59). While demand grew, little new generation was being built in the state, causing power reserves to shrink. In both the SCAG Region and California, the commercial sector is the largest electricity user while the agricultural sector is the smallest.

Both private and public utilities serve the SCAG Region's electricity needs. Southern California Edison, provided approximately 70 percent of the total electricity demand in the region in 2000, covering all or nearly all of Orange, San Bernardino, and Ventura Counties, and most of Los Angeles and Riverside Counties (Figure 60). Ten municipal utilities and the Imperial Irrigation District, which comprise The Southern

California Public Power Authority (SCPPA) provided the remaining local electricity distribution service in the region. <sup>17</sup>

In 2000, residents in the region used electricity to provide energy services such as refrigeration (21 percent of electricity use), washing laundry, air conditioning, pool heating, lighting (20 percent), and for small household appliances (19 percent). In the industrial and commercial sectors, lighting, motors, and cooling were the largest electricity users. <sup>18</sup> Factors influencing electricity use in the region are economics and population growth. Weather also influences electricity use, particularly peak demand. Hot weather results in increased use of air conditioning and therefore increases peak demand.

Conventional fossil-fuel power plants still provide most of the SCAG region's power, with coal and natural gas being the two most dominant fuels. According to data from the SCPPA, the region's municipal utilities provide a much larger portion of electricity from coal than Southern California Edison does. According to projected 2002 figures, Southern California Edison's largest sources of energy are natural gas (38 percent) and nuclear power (25 percent) (see Figure 60a page 101). Equal portions of Southern California Edison's power come from coal (16 percent) and renewables (16 percent). The SCPPA resource mix is largely due to the overwhelming contribution of LADWP whose coal-fired plants provide about 50 percent of the utility's power, although they are located outside California (see Figure 60b page 101).<sup>19</sup>

#### **Natural Gas**

Natural gas demand increased by almost 36 percent between 1990 and 2000 in the SCAG Region, much higher than that of electricity. The Southern California Gas Company primarily serves the region. A municipal gas utility, Long Beach Energy (part of the City of Long Beach), supplies about 1.5 percent of the gas in the region.<sup>20</sup>

Excluding natural gas used to generate electricity, natural gas usage in the region consists of three nearly equal components: industrial and commercial use, residential use, and gas usage in thermally enhanced oil recovery (TEOR) operations, where heat is used to improve pumping of viscous petroleum from production fields.<sup>21</sup> Presently, natural gas vehicles represent a tiny fraction of the region's natural gas usage (about half of one percent), although this use of natural gas is expected to increase dramatically in the next decade.



# **QUALITY OF LIFE**

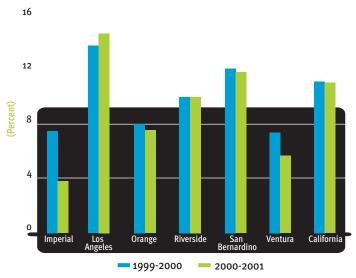


#### **Student Performance**

#### Why is this important?

■ High school student performance is measured through three indicators: 1) high school dropout rates, 2) percent of high school graduates meeting the University of California (UC) or California State University (CSU) entrance requirements, and 3) percent of high school graduates meeting criteria on SAT/ACT Tests. High school dropouts are severely disadvantaged in competing for quality jobs. Performance on

Figure 61
Dropout Rates in Public High Schools



Source: California Department of Education

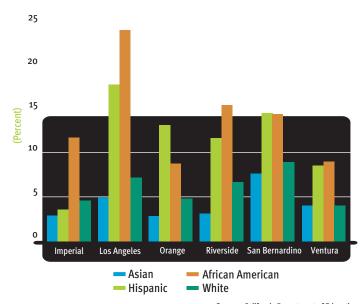
the last two indicators reflects the potential level of success in pursuing college education by high school graduates.

#### How are we doing?

Between 1999 and 2001, Los Angeles County had the highest dropout rate in public high schools in the region followed by San Bernardino County (Figure 61). These were also the two counties in the region with higher dropout rates than the state. There was a significant variation

Figure 62

Dropout Rates by Ethnicity in Public High Schools
2000-2001

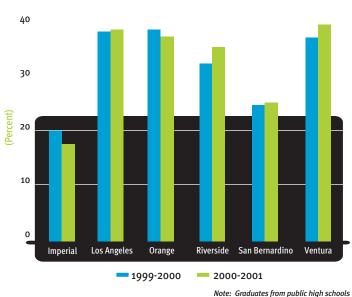


Source: California Department of Education

among the counties, ranging from about 15 percent in Los Angeles to less than 4 percent in Imperial from 2000 to 2001. From 2000 to 2001, Los Angeles was the only county with a higher dropout rate. On the other hand, Imperial County's dropout rate decreased by almost half, from approximately 8 percent to less than 4 percent.

There was a significant disparity in dropout rates among the different racial and ethnic groups in the region. African American students experienced about a 25 percent dropout rate in Los Angeles County, in contrast to about 3 percent for Asian students in Orange and Imperial Counties. African American and Hispanic youths had much higher dropout rates than White or Asian high school students in every county (Figure 62).

Figure 63
Graduates Meeting UC or CSU Entrance Requirements

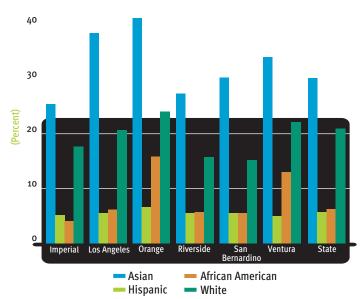


Source: California Department of Education

As to the percent of graduates in public schools meeting UC or CSU entrance requirements, the three coastal counties (Los Angeles, Orange and Ventura) continued to outperform the other three inland counties (Imperial, Riverside and San Bernardino) (Figure 63). The three coastal counties also had higher attainment rates for Bachelor's degrees as discussed under "Education Attainment" (see Figure 9 page 13).

As to the percent of high school graduates meeting criteria on SAT/ACT Tests, significant disparity also exists among different racial and ethnic groups (Figure 64). Asian and White students outperformed Hispanic and African American counterparts in every county in the region. However, African American students in Orange County performed as well as Whites in Riverside and San Bernardino Counties.

Figure 64
Graduates Meeting SAT/ACT Test Criteria
2000-2001



Note: Graduates from public high schools Source: California Department of Education

#### **Public Safety**

#### Why is this important?

■ Crime related activities consume an enormous amount of valuable social and economic resources. The social costs are real, though less quantifiable, including for example, pain and suffering of crime victims and their families and weakening of community cohesion. The economic costs include loss of productivity because of death or disability resulting from crime, medical costs, and loss of property values in neighborhoods with high crime rates.

#### How are we doing?

The overall crime rate has been decreasing in the region, state and the nation since the early 1990s.¹ During the 1990s, violent crime rates generally went down in every county in the region (Figure 65). Violent crimes include homicide, forcible rape, robbery and aggressive assault. The rate of decrease was among the steepest recorded since World War II. Factors contributing to the decrease in crime rates include general improvements in law enforcement as well as better economic conditions, particularly during the second half of the 1990s decade.<sup>2</sup>

From 1990 to 2000, the region as a whole consistently had higher violent crime rates than the state, primarily because of the higher rate in Los Angeles County. Within the region, Ventura and Orange Counties had the lowest rates in violent crime.

An important recent exception to crime reduction was when the violent crime rate in Los Angeles County in 2000 increased by more than five percent from 1999. The increase occurred in all categories of violent crime.3 The rate of homicides increased from 9.1 to 10.3 per 100,000 population. The number of homicide victims, though it had decreased

Figure 65 **Violent Crime Rate** Per 100,000 Population

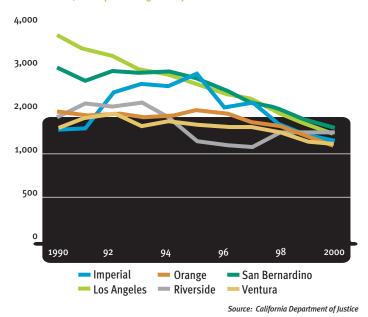


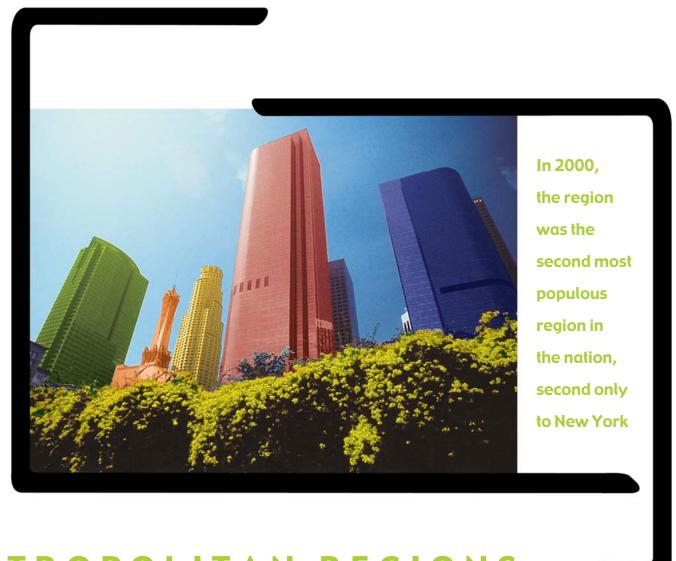
from 1,856 persons in 1991 to 891 persons in 1999, increased significantly back to 1,000 persons in 2000, accounting for almost 50 percent of the total homicide victims in California. Between 1999 and 2000, Los Angeles was also the only county in the region with a higher property crime rate.

In 2001, statewide major crime rates increased by almost 4 percent. The number of homicides reported increased by 5 percent and robbery increased by about 4 percent. The number of property crimes increased by 6 percent from 2000 to 2001. The number of hate crime events increased by almost 16 percent in 2001 from the previous year.4

Juvenile felony arrests rates declined between 1990 and 2000 in every county in the region (Figure 66). A felony offense is defined as a crime which is punishable by death or by imprisonment in a state prison. Gaps among the counties in juvenile arrest rates were significantly narrowed at the end of the decade. Statewide data showed that felony arrest rates for California's juveniles also displayed significant racial and ethnic disparities. The arrest rate for African American juveniles was more than three times higher than other juveniles. The juvenile arrest rate has been higher than the adult arrest rate since 1990. The arrest rate for property offenses and robberies is twice as high for juveniles than for adults.

Figure 66
Juvenile Felony Arrests
Per 100,000 Population Aged 10-17





# METROPOLITAN REGIONS

# METROPOLITAN REGIONS

■ In order to fully assess the progress of our region, it is useful to compare the performance of our region with that of other regions. This section compares the SCAG Region to the other eight largest metropolitan regions in the nation. ■ ■

Figure 67
Population by Metropolitan Region

Rank	Metropolitan Region Name	Popu 1990	lation 2000	Population 1990 to Number	
1	New York/No. New Jersey/ Long Island, NY/NJ/CT/PA CMSA	19,549,649	21,199,865	1,650,216	8.4%
2	SCAG REGION*	14,640,832	16,516,006	1,875,174	12.8%
3	Chicago/Gary/Kenosha, IL/IN/WI CMSA	8,239,820	9,157,540	917,720	11.1%
4	Washington/Baltimore, DC/MD/VA/WV CMSA	6,727,050	7,608,070	881,020	13.1%
5	San Francisco/Oakland/ San Jose, CA CMSA	6,253,311	7,039,362	786,051	12.6%
6	Philadelphia/Wilmington/ Atlantic City, PA/NJ/DE/MD CMSA	5,892,937	6,188,463	295,526	5.0%
7	Boston/Worcester/Lawrence, MA/NH/ME/CT CMSA	5,455,403	5,819,100	363,697	6.7%
8	Detroit/Ann Arbor/Flint, MI CMSA	5,187,171	5,456,428	269,257	5.2%
9	Dallas/Fort Worth, TX CMSA	4,037,282	5,221,801	1,184,519	29.3%

\*The SCAG Region includes Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura Counties. Except for Imperial County, the other five counties belong to the Los Angeles-Riverside-Orange Consolidated Metropolitan Statistical Area (CMSA).

Source: 1990 and 2000 Census

#### **Socio-Economic Indicators**

#### **Population**

In 2000, the SCAG Region was the second most populous region in the nation, second only to New York. Between 1990 and 2000, the region had the largest population increase, about 1.9 million, and the third highest growth rate after Dallas and Washington.

Among the nine largest metropolitan regions in the nation, Southern California had the second youngest median age, just behind the Dallas Region.

Figure 68
Median Age by Metropolitan Region

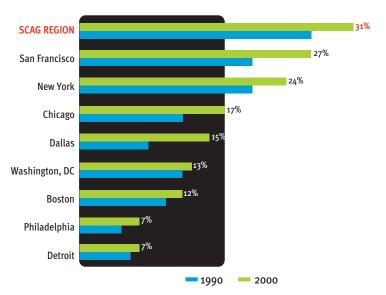


Source: 2000 Census

#### **Gateway Region**

Southern California is one of the most dynamic gateway regions in the nation and the world, due to its high proportion of foreign-born population and its leading position in international trade. In 2000, the region had the highest percentage of foreign-born population among the largest metropolitan regions. About one in every six foreign-born residents in the nation lives in Southern California.

Figure 69
Foreign-Born Population by Metropolitan Region

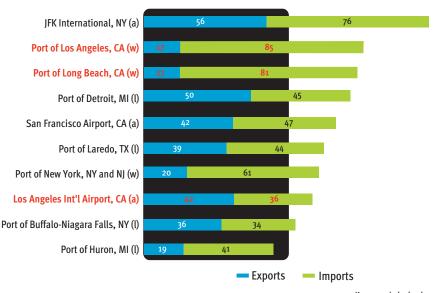


Source: 1990 and 2000 Census

The region contains three of the top ten international trade gateways in the nation. In 2000, the Ports of Los Angeles and Long Beach ranked second and third respectively, while Los Angeles International Airport ranked as the eighth largest.

Figure 70

Top 10 International Trade Gateways in US
2000 (Billions)



Key: a = air; l = land; w = water

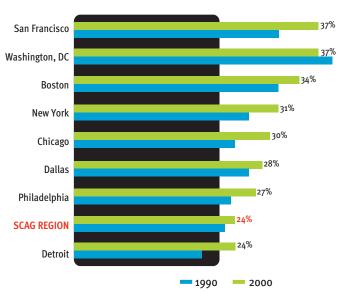
Source: Bureau of Transportation Statistics (2002). Pocket Guide to Transportation.

#### **Educational Attainment**

As to the educational attainment of its residents, the region ranked eighth among the nine largest metropolitan regions in the nation in 2000 for bachelor's degrees or higher. The region ranked last in the attainment of high school diplomas or higher.

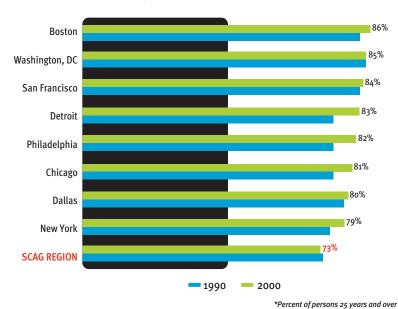
Figure 71

Educational Attainment by Metropolitan Region
(Bachelor's Degree or Higher\*)



\*Percent of persons 25 years and over Source: 1990 and 2000 Census

Figure 72
Educational Attainment by Metropolitan Region
(High School Diploma or Higher\*)

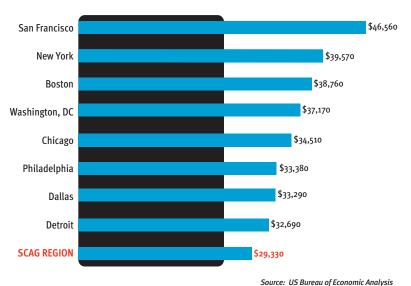


Source: 1990 and 2000 Census

#### **Income**

The region's per capita income in 2000 was \$29,330, the lowest among the largest metropolitan regions, compared to \$46,560 for the San Francisco Bay Area.

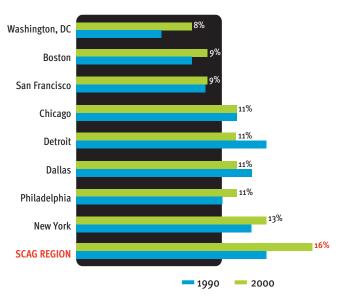
Figure 73
Per Capital Personal Income by Metropolitan Region
2000



#### **Poverty**

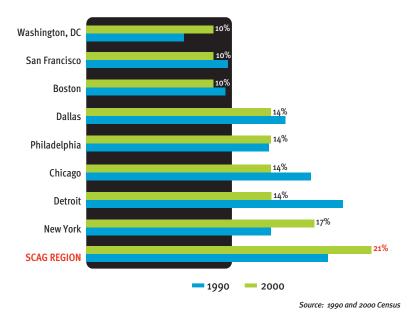
The region had the highest poverty rate among persons of all ages as well as children under 18. Unlike Southern California, many of the largest metropolitan regions made improvements in reducing poverty rates, particularly for children under 18 during the 1990s.

Figure 74
Persons in Poverty by Metropolitan Region (Percent)



Source: 1990 and 2000 Census

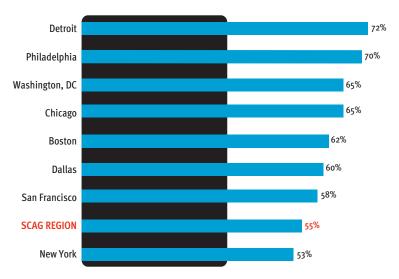
Figure 75
Children (Under 18) in Poverty by Metropolitan Region (Percent)



#### Homeownership

The region's homeownership rate of 55 percent in 2000 ranked eighth among the largest metropolitan regions, only ahead of New York. The San Francisco Bay Area, though famous for its high housing price, actually achieved a 58 percent homeownership rate, surpassing Southern California.

Figure 76
Homeownership by Metropolitan Region
2000

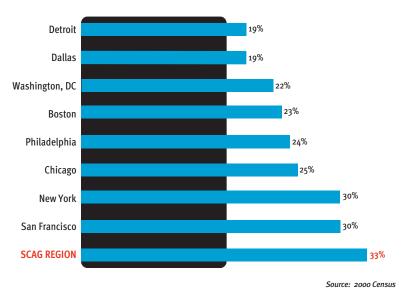


Source: 2000 Census

#### **Housing Affordability**

The region had the highest percentage (33 percent) of owner-households with housing costs greater than 30 percent of the total household income.

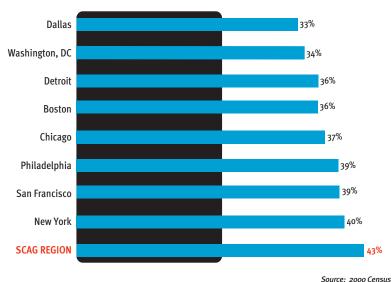
Figure 77
Housing Cost Burden by Metropolitan Region
1999 (Owners with Cost Above 30 Percent of Household Income)



In addition, 43 percent of renter-households in the region had housing costs greater than 30 percent of the household income, the highest in the nation. Finally, in both measures, Southern California had a higher housing cost burden than both the New York Metropolitan Region and the San Francisco Bay Area.

Figure 78

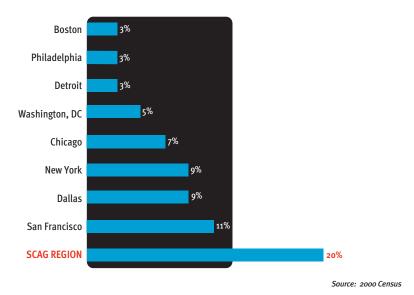
Rental Cost Burden by Metropolitan Region
1999 (Renters with Cost Above 30 Percent of Household Income)



#### **Housing Crowding**

Southern California had the most crowded housing (20 percent). San Francisco Bay Area had the second highest with 11 percent. In addition, seven of the nine largest metropolitan regions had less than 10 percent of their housing falling into the crowded housing category.

Figure 79
Crowded Housing by Metropolitan Region
2000 (Percent of Housing with More Than One Person per Room)

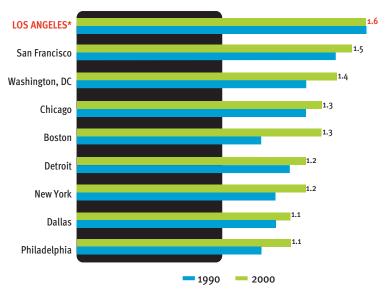


#### **Transportation**

#### **Highway Congestion**

Los Angeles and Orange Counties together ranked as the most congested metropolitan area in the nation in 1990 and in 2000 based on a Roadway Congestion Index. While the congestion index in all the other large metropolitan areas increased significantly during the 1990s, Los Angeles maintained its congestion index level. In 2000, the Los Angeles metropolitan area also had the highest annual hours of congestion delay, as well as congestion cost per person.

Figure 80
Roadway Congestion by Metropolitan Area



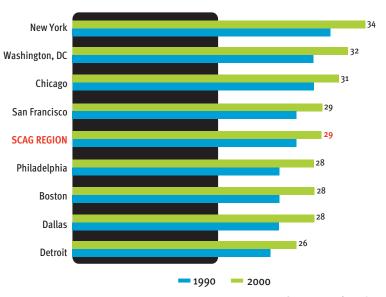
Includes Los Angeles and Orange Counties only
Source: Texas Transportation Institute

## **Journey to Work: Travel Time**

The region's average travel time to work increased by about 3 minutes, from 26 to 29 minutes, and ranked fifth highest among the nine largest metropolitan regions.

Figure 81

Average Travel Time to Work by Metropolitan Region
(Minutes)



Source: 1990 and 2000 Census

## **Journey to Work: Mode Choice**

The region had the highest share of residents who carpooled to work.

Figure 82

Carpooled to Work by Metropolitan Region
(Percent of Workers 16 Years and Over)

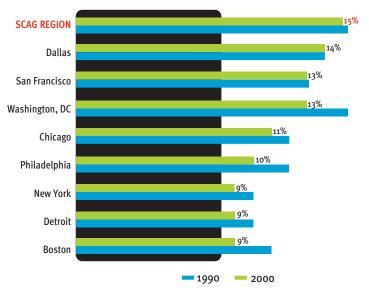
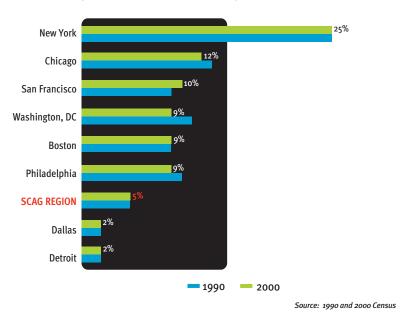


Figure 83

Transit to Work by Metropolitan Region
(Percent of Workers 16 Years and Over)

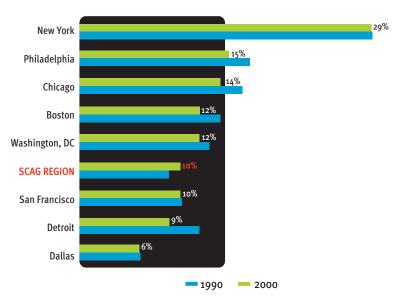


The region ranked 7th as to the percent of residents who used transit in their journey to work, only ahead of the Dallas and Detroit regions.

### **Households Without a Car**

Contrary to the national trend, the percentage of households without a car in the region actually increased during the 1990s.

Figure 84
Households Without a Car by Metropolitan Region
(Percent)



Source: 1990 and 2000 Census

## **NOTES**

## **Population**

- 1. Specifically, the Inland Empire's population grew by a phenomenal 66 percent during the 1980s and 26 percent during the 1990s, both were the highest among the nine subareas in California. See Johnson, Hans P. 2002. A State of Diversity: Demographic Trends in California's Regions, Table 2, p. 6, Public Policy Institute of California.
- **2.** Southern California Association of Governments. 1995. *Migration in the Southern California Region*.
- 2000 Census.
- 4. It is important to note that the immigrant population, after they have settled longer in the region, tend to have gradual improvements in the socioeconomic well-being. However, even after 20 years of improvements, the immigrant population still lags behind the native-born population in their socioeconomic well-being. For an illustration of this slow upward mobility process in the area of poverty, please see Figure 6a, page 94.
- 5. 1990 and 2000 Census.

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- 2. For total nonfarm wage and salary employment, also see Langdon, David S. et al. 2002. "U.S. Labor Market in 2001: Economy Enters a Recession", Monthly Labor Review, February 2002.
- 3. California State University, Long Beach. 2002. 2002-2003 Economic Forecast – Southern California and Its Counties.
- **4.** California Employment Development Department (EDD), *Labor Market Information*.
- 5. Data on employment increase is from the California EDD except that for direct international trade employment, data is from the *International Trade Trends and Impacts, the Los Angeles Region* published by the Los Angeles Economic Development Corporation, 2002. Direct international trade employment involves activities related to moving commodities in and out of the customs district and does not include any manufacturing activities. Also the region's employment in Apparel and Textile industries, though it had a net increase of 20,000 jobs during the 1990s, reached its peak in 1997 and has begun to decline ever since.
- 6. California State University, Long Beach. 2002. 2002-2003 Economic Forecast – Southern California and Its Counties.

- 7. California EDD. 2002. The State of the State's Labor Market: A Labor Day Briefing for California.
- 8. California EDD. Labor Market Information.
- **9.** Reyes, Belinda I., Editor. 2001. A Portrait of Race and Ethnicity in California: An Assessment of Social and Economic Well-Being, Public Policy Institute of California, p. 140.
- **10.** Council of Economic Advisors. 1998. *Changing America: Indicator of Social and Economic Well-Being by Race and Hispanic Origin.*
- 11. Reyes, Belinda I., op cited.
- **12.** All taxable sales data in this section are from the California State Board of Equalization.
- **13.** Southern California Association of Governments. 1989. International Trade and Goods Movement: The Southern California Experience and Its Future.
- 14. Lowenthal, Abraham F., et al. Strengthening Southern California's International Connections: Trade and Investment Aspects, Pacific Council on International Policy, prepared for the University of Southern California, Southern California Studies Center.
- 15. Lowenthal, Abraham R., et al. estimated that more than 56 percent of the total trade through LACD was due to transshipment in 1994. Since then, imports through LACD have increased significantly from \$130 billion to \$200 billion largely to satisfy additional national demand outside of the SCAG Region. Hence, the original 56 percent would be an underestimate for 2001.

- **16.** Treverton, Gregory F. 2001. *Making the Most of Southern California's Global Engagement*, Pacific Council on International Policy, p. 7.
- **17.** Los Angeles Economic Development Corporation. 2002. *International Trade Trends and Impacts, the Los Angeles Region.*

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- 1. U.S. Census Bureau. 2001. *Population Profile of the United States:* 2000, p. 12-4.
- 2. California Department of Housing and Community Development based on HUD CHAS-CD and 1990 Census. It should be noted that the median household income in the region declined in 2000 from 1990.
- 3. California Budget Project based on 2000 Current Population Survey.
- **4.** U.S. Bureau of Labor Statistics. 2002. Consumer Spending Patterns in the Los Angeles Consolidated Metropolitan Statistical Area (CMSA), 1999-2000.

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- Texas Transportation Institute. 2002. The 2002 Urban Mobility Report.
- 2. Ibid.
- 3. University of Southern California, Population Dynamics Group. 2001. *Demographic Futures for California*.

- **4.** Southern California Association of Governments. 1999. *State of the Commute*, p. VII.
- 5. Southern California Association of Governments. 2001. *Discussion Paper on the Short-Term Economic Impacts and Potential Long-Term Implications for Regional Aviation Following the September* 11 Events.
- Airports Council International
- 7. Los Angeles Economic Development Corporation. 2002. International Trade Trends and Impacts, the Los Angeles Region.
- 8. Southern California Association of Governments. 2002. Aviation System Status (Staff Memo)
- 9. Los Angeles Economic Development Corporation, Ibid.
- **10.** Center for Continuing Study of the California Economy. 2002. *California Economic Growth*, pp. 8-17.

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- 2. South Coast Air Quality Management District.
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- 4. South Coast Air Quality Management District.

- 5. Hinds, William C., op cited.
- 6. Hinds, William C., op cited.
- 7. Los Angeles Department of Water and Power, available: http://www.ladwp.com; and the Metropolitan Water District.
- 8. Metropolitan Water District; estimates based on SCAG data and DOF reports; does not reflect 2000 census data.
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facilities that accept inert waste exclusively on lands where surface mining operations were conducted when the disposal is for purposes of reclamation, as specified.

- 16. California Energy Demand Forecast, September 2001.
- 17. San Diego Gas & Electric serves a small number of customers in South Orange County.
- **18.** California Energy Commission. 2001. *California Energy Demand* 2002-2012 Forecast.
- **19.** Southern California Edison and Southern California Public Power Authority.
- **20.** California Energy Demand 2000-2010, June 2000. These data do not include natural gas burned for electricity generation.
- 21. California Energy Commission.

## **Quality of Life**

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- 5. California Department of Justice, *Report on Juvenile Felony Arrests in California*, 1998.
- 6. Ibid.
- 7. Ibid.

## **LIST OF MAPS**

- 1. SCAG Region
- 2. Foreign-Born Population
- 3. Educational Attainment (Persons Without a High School Diploma)
- **4.** Unemployed Persons
- Persons in Poverty
- 6. Housing Cost Burden (Homeowner Households)
- 7. Overcrowded Housing
- 8. Commuter Rail, Urban Rail and Rapid Bus System
- Park and Ride Lots
- 10. Average Travel Time to Work

The Thomas Brothers Network was used in SCAG maps.

## LIST OF FIGURES

## **Population**

- 1. Population in the Region
- la. Average Annual Population Increase\*
- 2. Population Growth Share by County
- **3.** Population Growth by Component
- 3a. Population Growth Components by County\*
- **4.** Foreign-Born Population
- 4a. Place of Birth of Population\*
- 4b. Foreign-Born Population by County\*
- 5. Foreign-Born Population Share of Population Growth
- **6.** Characteristics of Domestic Outmigrants vs. Foreign Immigrants
- 6a. Persons below Poverty in California\*
- Median Age
- 8. Persons 65 Years and Over
- **9.** Educational Attainment (Bachelor's Degree or Higher)
- 10. Educational Attainment (High School Diploma or Higher)

### The Economy

- 11. Wage and Salary Employment (Change from Previous Year)
- **12.** Wage and Salary Employment
- 12a. Wage and Salary Employment (Percent Change from Previous Year)\*
- 13. Employment Change
- 13a. Employment Change by County\*
- 14. Employment Change by Sector
- 15. Employment by Sector
- 16. Manufacturing Employment Change by County
- 17. Unemployment Rate
- 18. Unemployment Rate Imperial County
- 19. Unemployment Rate by County
- 20. Growth of Personal Income Per Capita
- 21. Real Personal Income Per Capita
- 22. Average Payroll Per Job
- 23. Real Personal Income Per Capita by County

- **24.** Per Capita Personal Income Ranking among the 17 Largest Metropolitan Regions in US
- 25. Per Capita Personal Income Ranking among 58 California Counties
- **26.** Median Household Income
- **27.** Persons in Poverty
- 27a. Poverty Population\*
- 28. Children (Under 18) in Poverty
- 29. Taxable Sales All Outlets
- 29a. Taxable Sales (Changes from Previous Year)\*
- **30.** Exports and Imports LA Customs District (Current Dollars)
- **31.** Exports and Imports LA Customs District (Percent of US)

## Housing

- 32 Residential Building Permit Activity, Units
- 33. Residential Building Permit Activity, Valuations
- 34. Population Increase vs. New Housing
- 34a. Composition of Residential Units\*
- **35.** Residential Building Permit Activity by County
- **36.** Homeownership Rates

- **37.** Housing Affordability
- 38. Persons per Household
- **39.** Crowded Housing

## **Transportation**

- **40.** Daily Vehicle Miles of Travel
- **41.** Population Growth vs. VMT Growth
- 41a. Population Growth vs. VMT Growth by County, 1980-1990\*
- 41b. Population Growth vs. VMT Growth by County, 1990-2000\*
- **42.** Annual Unlinked Transit Trips All Major Operators
- 42a. Population, VMT and Transit Trips\*
- 43. Annual Unlinked Trips Large Operators
- 44. Transit Trips Per Capita
- 45. Average Travel Time to Work
- 45a. Travel Time to Work by All Modes\*
- 45b. Travel Time to Work by Transit\*
- **46.** Drove Alone to Work
- 46a. Mode Choice to Work\*

<sup>\*</sup>Figures shown in the Appendix.

- **47.** Carpooled to Work
- **48.** Transit to Work
- **49.** Air Passenger Traffic in Major Airports
- **50.** Air Passenger Traffic by Airport
- **50a.** Aircraft Operations by Airport\*
- **51.** Air Cargo in the Six Largest Airports
- **52.** Port Cargo at Los Angeles and Long Beach

#### **Environment**

- **53.** Number of Days Exceeding Federal Standards (Ozone and Carbon Monoxide)
- 53a. Progress in Reducing Ozone Pollution\*
- **54.** Percent of Days Exceeding Federal Standard (PM10)
- 55. Water Consumption in Metropolitan Water District Service Area
- **56.** Per Capita Water Consumption
- **57.** Land Use Conversion
- **58.** Solid Waste Disposal at Landfills
- **59.** Electricity Consumption
- **60.** Electricity Use by Providers

- 60a. Southern California Edison Energy Mix\*
- 60b. SCPPA Energy Mix\*

### **Quality of Life**

- **61.** Dropout Rates in Public High Schools
- **62.** Dropout Rates by Ethnicity in Public High Schools
- **63.** Graduates Meeting UC or CSU Entrance Requirements
- 64. Graduates Meeting SAT/ACT Test Criteria
- 65. Violent Crime Rate
- **66.** Juvenile Felony Arrests

### **Metropolitan Regions**

- 67. Population by Metropolitan Region
- 68. Median Age by Metropolitan Region
- 69. Foreign-Born Population by Metropolitan Region
- 70. Top Ten International Trade Gateways in US
- **71.** Educational Attainment by Metropolitan Region (Bachelor's Degree or Higher)
- **72.** Educational Attainment by Metropolitan Region (High School Diploma or Higher)

\*Figures shown in the Appendix.

- 73. Per Capita Personal Income by Metropolitan Region
- 74. Persons in Poverty by Metropolitan Region
- **75.** Children (Under 18) in Poverty by Metropolitan Region
- **76.** Homeownership by Metropolitan Region
- 77. Housing Cost Burden by Metropolitan Region
- 78. Renter Cost Burden by Metropolitan Region
- 79. Crowded Housing by Metropolitan Region
- 80. Roadway Congestion Index by Metropolitan Area
- 81. Average Travel Time to Work by Metropolitan Region
- 82. Carpooled to Work by Metropolitan Region
- 83. Transit to Work by Metropolitan Region
- 84. Households Without a Car by Metropolitan Region

## **APPENDIX OF ADDITIONAL FIGURES**

Figure 1a
Average Annual Population Increase

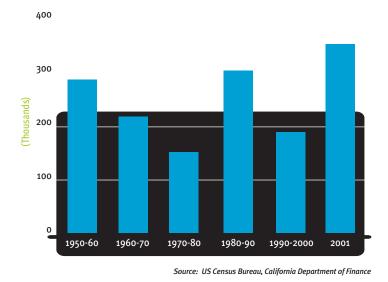
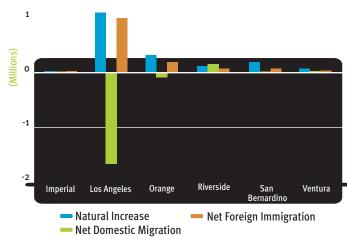


Figure 3a

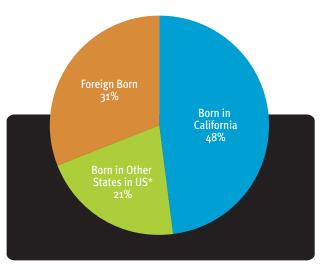
Population Growth — Components by County
1990-2000

2



Source: California Department of Finance

Figure 4a **Place of Birth of Population** 2000



\*Includes 1% representing persons born in Puerto Rico, US island areas and born abroad of American parent(s)

Source: 2000 Census

Figure 4b **Foreign-Born Population by County** 2000

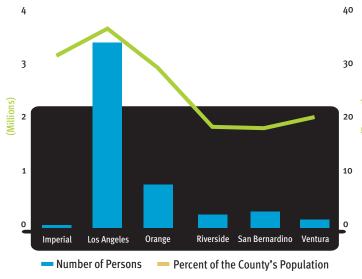
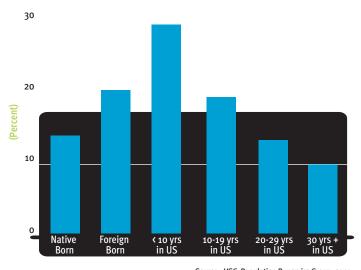
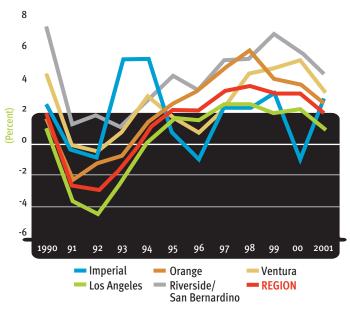


Figure 6a
Persons Below Poverty in California
2000



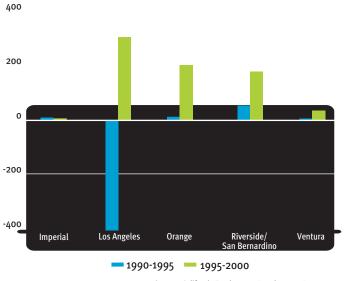
Source: USC, Population Dynamics Group, 2001. "Demographic Futures for California," based on data in the Current Population Survey 2000.

Figure 12a
Wage and Salary Employment
Percent Change from Previous Year



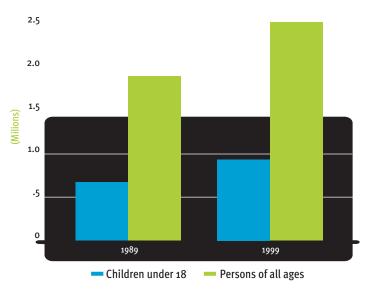
Source: California Employment Development Department

Figure 13a **Employment Change by County** (000)



Source: California Employment Development Department

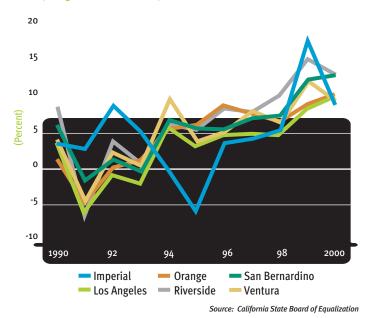
Figure 27a **Poverty Population** 



Source: 1990 and 2000 Census

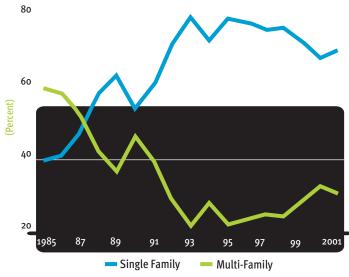
Figure 29a

Taxable Sales
(Changes from Previous Year)



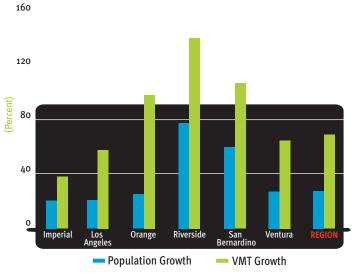
Composition of Residential Units\*

Figure 34a



\* Based on annual building permits issued Source: Construction Industry Research Board

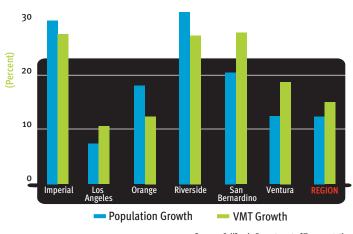
Figure 41a **Population Growth vs. VMT Growth by County** 1980-1990



Source: California Department of Transportation

Figure 41b **Population Growth vs. VMT Growth by County** 1990-2000

40

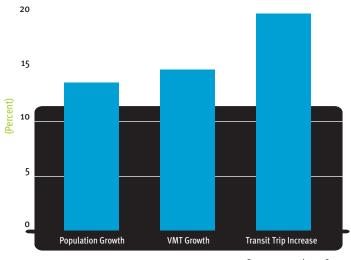


Source: California Department of Transportation

Figure 42a

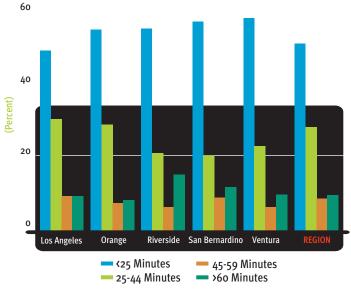
Population, VMT and Transit Trips

Percent Increase, 1990-2000



Source: 1990 and 2000 Census, California Department of Transportation and National Transit Database

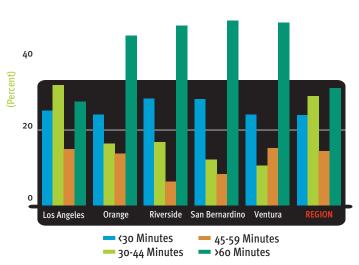
Figure 45a
Travel Time to Work by All Modes
2000



Source: 2000 Census Supplemental Survey. Imperial County data not available.

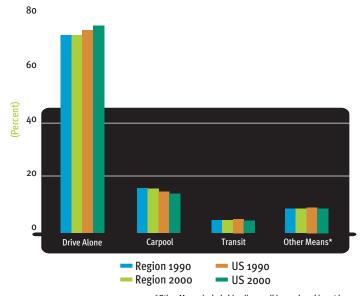
Figure 45b **Travel Time to Work by Transit** 2000





Source: 2000 Census Supplemental Survey. Imperial County data not available.

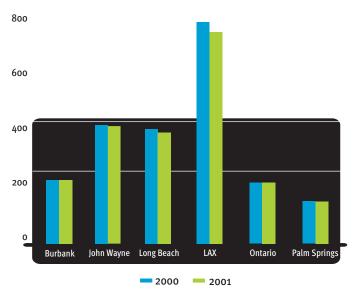
Figure 46a **Mode Choice to Work** (Workers 16 Years and Over)



\*Other Means include bicycling, walking and working at home

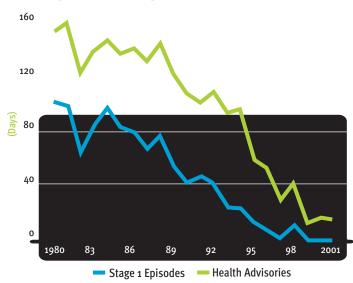
Source: 1990 and 2000 Census

Figure 50a
Aircraft Operations by Airport
Departures and Arrivals (000)



Source: SCAG gathered data

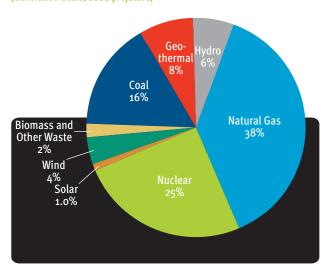
Figure 53a
Progress in Reducing Ozone Pollution



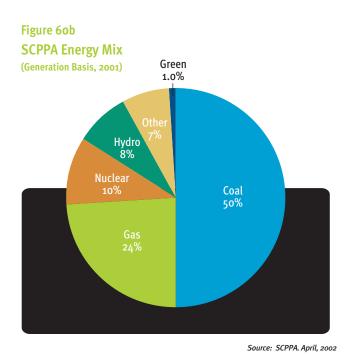
Note: Data represents the number of days a standard was exceeded anywhere in the South Coast Air Basin Source: South Coast Air Quality Management District

Figure 60a

Southern California Edison Energy Mix
(Generation Basis, 2002 projected)



Source: Southern California Edison, June, 2002



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## **Mission Statement**



**Leadership, vision** and **progress** which promote economic growth, personal well-being, and livable communities for all Southern Californians.

## The Association will accomplish this Mission by:

- ▲ Developing long-range regional plans and strategies that provide for efficient movement of people, goods and information; enhance economic growth and international trade; and improve the environment and quality of life.
- Providing quality information services and analysis for the region.
- ▲ Using an inclusive decision-making process that resolves conflicts and encourages trust.
- Creating an educational and work environment that cultivates creativity, initiative, and opportunity.

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